

ABSTRACT OF THE DISCLOSURE**METHOD AND SYSTEM****USING HARDWARE ASSISTANCE FOR INSTRUCTION TRACING
WITH SECONDARY SET OF INTERRUPTION RESOURCES**

A method, system, apparatus, and computer program product is presented for processing instructions. A processor is able to receive multiple types of interruptions while executing instructions. The types of interruptions can include aborts, faults, interrupts, and traps. The processor has a plurality of interruption resources, such as interruption control registers, in which a type of interruption can be associated with a specific interruption resource. In response to receiving an interruption, the processor saves processor state information into an interruption resource based on the type of the received interruption, after which the processor invokes an interruption handler to process the received interruption. The processor is able to save a first processor state to a first interruption resource while saving a second processor state to a second interruption resource, thereby allowing the processor to save processor state information on single-step and taken branch interruptions so that other interruptions can be traced.